

REMARKS

Reconsideration of the application is respectfully requested.

I. Claim Objections

The objections to the claims have been addressed by the amendments to claims 1, 17 and 19.

II. Claims Rejected Under 35 U.S.C. §103

Claims 1-16 stand rejected as being obvious in view of U.S. Patent No. 5,737,369 issued to Retzer ("Retzer") in view of U.S. Patent No. 6,807,498 issued to Premy ("Premy"). Applicants respectfully disagree with the rejection, because neither Retzer nor Premy teaches or suggests *disturbing a running variable* or *disturbing a recovered clock phase* when testing a data recovery circuit or a receiver, respectively.

In Retzer, a method for recovering data in the presence of error transients is described. A particular type of receiver is described, for recovering data in the presence of error transients. Note how Retzer refers to systematic channel impairments which preclude the ideal situation of having fixed reference levels and timing at the receiver. [Retzer, col. 2, lines 20-38] The Office Action at page 3 refers to several elements of the receiver in Retzer, including a Transceiver 180, Data Bit Recovery unit 185, and a conventional timing recovery circuit 460. Details of the Data Bit Recovery unit 185 are given at col. 5, line 42 through col. 6, line 26. An improved timing recovery circuit that uses a one bit delay element 440 and a Subtractor 450 is discussed.

However, nowhere does Retzer or Premy teach or suggest *disturbing a running variable* or *disturbing a recovered clock phase of a receiver* as recited in Applicants' claims 1 and 8, respectively. As is clear from Applicants' Specification, the meaning of the term *disturbing* requires some form of interfering to alter the position or arrangement of something, in particular either a *running variable in a closed control loop of a DRC*, or a *recovered clock phase of a receiver to simulate an effect of jitter*. Both Retzer and Premy only refer to error transients that have been introduced externally into the input waveform (outside the receiver), that either originate at the transmitter or are introduced in the

channel as channel impairments. These error transients cannot be said to disturb internally a running variable in a DRC, or a recovered clock phase of a receiver. This point has been clarified in the amendment to claim 1 without introducing any new matter. See, for example, Fig. 2 which depicts a DRC with “internal” disturbance capability, as opposed to disturbing the transmitter (see also Applicants’ paragraph [0008]).

The error transients of Retzer and Premy are simply part of what the DRC or receiver is designed to expect (and, of course, indirectly affect the value of any running variables). In contrast, Applicants’ use of the term *disturbing* refers to something that the DRC or receiver is not expecting, namely something that is interfering internally with its “normal” operation of recovering data.

Claim 1 as amended refers to *disturbing internally* (that is interfering from within) the running variable, while the DRC is processing a received test signal. This disturbance, therefore, cannot be part of the received or external test signal.

In view of the foregoing, reconsideration and withdrawal of the art rejection is requested, as claims 1 and 8 have been amended to more clearly point out a difference relative to the relied upon art of Retzer and Premy.

As to claim 11, this claim also stands rejected for the same reasons as claims 1 and 8, namely that it appears the Office Action is taking the view that *injecting jitter into a running phase of a closed control loop in a data link receiver* reads on error transients that are introduced into a waveform either at the transmitter or in the channel, or even at the front end of the receiver. Applicants respectfully disagree with this interpretation of the claimed subject matter.

As is clear from Applicants’ Specification, an effective *jitter* is introduced or forced into the *running phase*, separately than any error transients that may be present in the input (external) waveform to the receiver. To clarify, Applicants have amended claim 11 to indicate that the *jitter is injected internally into the running phase* of the closed control loop in the receiver. Neither Retzer nor Premy teach or suggest such internal jitter injection into the closed control loop of the receiver, but rather only refer to jitter or transients that appear in the normal, external waveform that appears at the input to the

receiver. Accordingly, reconsideration and withdrawal of the rejection of claim 11 is respectfully requested.

Finally, independent claim 17 stands rejected as being obvious in view of Retzer, and in particular, refers to the Subtractor 450 as corresponding to Applicants' claimed *advance or retard generator*. The Office Action also understands that Retzer does not explicitly disclose Applicants' *offset control unit with an input for a programmed test parameter* where *this offset control unit has an output to force one of an advance and retard via the advance or retard generator*. According to the Office Action, it would have been obvious to "introduce an offset into the transmitted waveform as taught by Retzer, thus causing a waveform distortion for the purpose of simulating a channel impairment ..."

However, Applicants respectfully point out that claim 17 refers to an interface having a receiver which includes the offset control unit, all within the body of the claim. As recited, the *offset control unit* is coupled to operate on the signal that has been received by the receiver. This introduction of offset is thus not into the transmitted waveform, but rather within the receiver, after the receiver input. Indeed, the *offset control unit* has an output that forces the advance or retard generator to act on the sampled data values of the receiver. This is not taught or suggested in Retzer, as Retzer merely refers to the introduction of transient errors either at the transmitter or through channel impairments, prior to input to the receiver. As neither Retzer nor Premy teach or suggest such a modification to a receiver, reconsideration and withdrawal of the rejection is respectfully requested.

Any dependent claims not mentioned above are submitted as not being anticipated or obvious, for at least the same reasons given above in support of their base claims.

It should be noted that not all of the assertions made in the Office Action, particularly those with respect to the dependent claims, have been addressed here, in the interest of conciseness. Applicants reserve the right to challenge any of the assertions made in the Office Action by the Examiner, with respect to the relied upon art references and how they would relate to Applicants' claim language.

CONCLUSION

In sum, a good faith attempt has been made to respond to the issues raised in the Office Action and to explain why the claims are believed to be in condition for allowance. A Notice of Allowance referring to claims 1-14 and 16-19, as amended here, is therefore respectfully requested to issue at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,
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Margaux Rodríguez January 3, 2007